Rural District of Chester-le-Street.

TWENTY-SIXTH

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

ON THE

Health and Sanitary Condition

OF THE DISTRICT

FOR THE YEAR 1920.

CHESTER-LE-STREET.

To the Chairman and Members of the Rural
District Council.

Mr. Chairman, Lady and Gentlemen,

I herewith submit for your consideration my Annual Report on the Health and Sanitary condition of your district during the year 1920.

I am,
Your obedient Servant,

JOHN TAYLOR.

30th April, 1921.

POPULATION.

I have estimated the population at the middle of the year at 70,000, but the correctness of this is highly problematical. Under present conditions it is extremely difficult to arrive at a probably correct estimate.

The excess of births over deaths is 1403 as compared with 941 last year and with 802 during the previous year.

MARRIAGES.

The number of marriages in the union of Chester-le-Street during the year has been 832 as compared with 770 last year and with 512 for the previous year. This gives a marriage rate of 23·7 per 1000 as compared with a rate of 22·64 per 1000 last year and with 15·0 per 1000 for 1918. The marriage rate for England and Wales for the year ended 30th Sept., 1920, was 20·7 per 1000.

BIRTHS.

The number of births registered during the year has been 2378 as compared with 1845 during last year and with 1891 during 1918.

The increase of births which occurred during the last half of 1919 continued during 1920, resulting in a gain of 533 during the year as compared with the previous year.

The birth-rate is 33·97 per 1000 as compared with a rate of 27·12 per 1000 last year and with a rate of 28·14 for 1918. The birth rate for the Administrative County has been 30·02 per 1000 and that for England and Wales 25·4 per 1000.

DEATHS.

The number of deaths registered during the year as occuring within your district has been 849 as compared with 824 last year and with 755 the previous year.

In addition to this there were 126 deaths registered outside the district of persons belonging to your district, but on the other hand, 25, registered as dying within the district were persons whose proper domicile was outside your district and consequently the exact number of deaths which should be credited to your district is 950 as compared with 908 last year and with 1200 during the year 1918.

The death-rate for year is 13·57 per 1000 as compared with 13·35 per 1000 last year, and with 17·82 per 1000 during 1918. The rate for the Administrative County is 12·28 per 1000, and for England and Wales it is 12·4 per 1000.

The death-rate of the 148 smaller towns whose population ranges from 20,000 to 50,000 is 11·3 per 1000, and I consider that your district should be comparable to these towns. If that be so, your death-rate is considerably higher than that of the smaller towns, but in judging such, it might be just to consider the birth-rates, and whilst your birth-rate is 33·97 per 1000, the birth rate of these towns is only 24·9 per 1000, no less than 11 per 1000 of a difference, so that whilst your district gains 408 per every 20,000, the smaller towns gain only 272 per 20,000.

INFANT DEATHS.

Infant deaths mean the deaths of children occurring before the end of the first year of life, and the death-rate of such is the proportion of such deaths to the number born during the year under review.

The infant deaths numbered 273 as compared with 203 last year, and with 238 during 1918. The infant death-rate is 114·8 per 1000 born as compared with 110·0 per 1000 born last year, and with 125 per 1000 born during the previous year.

The rate for the Administrative County is 106 per 1000 born, and that for England and Wales is 80 per 1000 born which is the same rate as that for the 148 smaller towns.

The infant death-rate, though higher this year than last year, compares favourably with the infant-death rates experienced before the commencement of the present century. Up to the end of the decade 1901—1905 there was an appreciable continued fall in this death-rate, but since that date the fall in the infant death-rate has been continuous.

The infant death-rate in your district during the decade 1901—1905 was 172·1 per 1000 born, decade 1906—1910 154·6 per 1000 born, decade 1911—1915 it was 144·7 and the decade 1916—1920 it is 116·2 per 1000 born. As this fall, more or less, coincided with the inauguration of the Health Visitor and her work during the years she has been active, and as there were no apparent causes otherwise for this remarkable fall in the infant death-rate, naturally the Health Visitor was accorded the glory of her undoubted good work, and to her was attributed chiefly the cause of the improvement.

Whilst undoubtedly the Health Visitor is a factor in the improvement of the health of the newly born child, and of its ability to survive the many dangers inseparable from early life, recent statistics prove that the fall of the infant death-rate during the first 20 years of the present century has been world wide, and where the Health Visitor is not in such evidence as with us.

Outside of all that it cannot be denied but that during the past 10 years climatic conditions have been such as favour a reduced infant death-rate. As showing the world wide fall in the infant death-rate, I append the following table to show that from the beginning of the present century the infant mortality decreased rapidly up to the commencement of the Great War, being interrupted only by the diarrhœa epidemic of 1911. This saving of infant life, remarkable indeed, is not due to a single cause, but has its biological explanation in decreased fecundity, the more favourable conditions of life, improved housing, probably the higher standard of education and also the greater interest in the problems of public health and preventive medicine.

If a continued improvement is maintained in house accommodation, improved sanitary surroundings of existing houses, the teaching of home cleanliness, of feeding and clothing of the newly or recently born child, and the attention to the expectant mother one would look forward to the maintenance of or the lessening of the present day rate of infant mortality.

" When the war broke out the movement for the preservation of infant life was progressing rapidly, and it is gratifying that, even though the progress has been somewhat checked, most of the attained results have been maintained. The following table gives the deaths under one year per thousand living births in some of the principal countries."—

Year.	England.	Scotland.	Ireland.	France.	Holland.	Denmark.	Norway.
1909	109	108	92	118	99	98	70
1910	105	108	95	111	108	102	68
1911	130	112	94	159	137	106	65
1912	95	105	86	106	87	93	67
1913	108	110	97	114	91	94	64
1914	105	111	87	109*	95	98	68
1915	110	126	92	141*	87	96	68
1916	91	97	83	122*	85	100	64
1917	96	107	88	123*	87	99	—
1918	97	100	86	—	93	74	—

Year.	Finland.	Prussia.	Bavaria.	Switzerland.	Italy.	Spain.	Australia.
1909	111	164	217	115	157	154	72
1910	118	157	202	105	140	149	75
1911	114	188	223	123	157	162	68
1912	109	146	177	94	128	137	72
1913	113	150	182	96	138	155	73
1914	104	164	193	91	130	152	71
1915	111	153	194	90	147	156	68
1916	110	146	190	78	—	147	70
1917	—	153	186	79	—	155	56
1918	—	148	203	88	—	—	59

* Without the invaded departments.

BIRTHS AND DEATHS OF ILLEGITIMATE CHILDREN.

During the year 97 births of illegitimate children have been registered as compared with 90 last year, and with 103 the previous year.

The illegitimate birth-rate is 1·38 per 1000 as compared with 1·32 per 1000 last year, and with 1·53 per 1000 during 1918.

The number of deaths of illegitimate children are 18, the same as last year, and 6 more than during 1918.

The infant illegitimate death-rate is 185·5 per 1000 born as compared with a death-rate of 200·0 per 1000 born last year, and with a rate of 116·5 per 1000 born during 1918.

Whilst the infant death-rate of the legitimately born child is 114·8 per 1000 born, that of the illegitimately born child is 185·5 per 1000 born, this shows that the unfortunate fatherless newly born child has many more dangers to face than its more fortunate brother who has a father to look to. The illegitimate child is often not wanted, is often deprived from financial reasons of the best care a mother can give her helpless new born child, and thus its chance of surviving all the ordinary dangers of early life is not so good as the more wanted legitimate child.

ZYMOTIC DEATHS.

The rate of deaths from the seven classical Zymotic diseases is dealt with only, viz:—deaths from Smallpox, Scarlet Fever, Diphtheria, Whooping Cough, Measles, Diarrhœa and Fever (including Typhus and Enteric). These deaths totalled 83 as compared with 96 last year, and with 118 during 1918.

The death-rate is 1·18 per 1000 as compared with a rate of 1·41 per 1000 last year, and with a rate of 1·75 for 1918. The Zymotic death-rate is 0·99 per 1000 for the Administrative County and 0·62 per 1000 for England and Wales, but in this Diarrhœa is excluded.

The following table gives the number of deaths from these diseases during the past 3 years.

	1918	1919	1920
Smallpox	0	0	0
Scarlet Fever	13	6	9
Measles	16	24	5
Whooping Cough	31	2	4
Diphtheria	19	26	21
Fever (Typhus and Enteric) ...	2	0	3
Diarrhœa	63	38	41

The following tables show the different death-rates per 1000 since 1887 :—

Year	Birth Rate	Quinquennial Average	Year	General Death Rate	Quinquennial Average
1887	39·00	36·77	1887	18·87	18·76
1888	37·70		1888	18·16	
1889	34·60		1889	18·50	
1890	35·80		1890	19·50	
1891	39·50	39·96	1891	19·90	19·20
1892	39·70		1892	19·10	
1893	40·40		1893	20·80	
1894	39·50		1894	20·10	
1895	40·70		1895	19·70	
1896	38·09	38·39	1896	19·00	18·51
1897	37·80		1897	16·50	
1898	38·78		1898	18·35	
1899	38·31		1899	18·44	
1900	38·96		1900	20·26	
1901	39·12	38·53	1901	19·26	18·31
1902	38·58		1902	17·29	
1903	38·36		1903	18·81	
1904	38·87		1904	18·50	
1905	37·71		1905	17·69	
1906	36·52	36·61	1906	16·59	16·13
1907	34·75		1907	16·44	
1908	37·49		1908	17·67	
1909	37·63		1909	15·01	
1910	36·65		1910	14·85	
1911	34·26	32·88	1911	16·34	14·96
1912	33·71		1912	13·91	
1913	32·54		1913	14·17	
1914	33·42		1914	14·40	
1915	30·46		1915	15·98	
1916	27·29	28·53	1916	14·45	14·31
1917	26·14		1917	12·38	
1918	28·14		1918	17·82	
1919	27·12		1919	13·35	
1920	33·97		1920	13·57	

Year	Zymotic Death Rate per 1,000	Quinquennial Average	Year	Infantile Death Rate per 1,000 Born	Quinquennial Average
1887	...		1887	201·0	179·3
1888	...		1888	177·7	
1889	2·30		1889	166·0	
1890	3·30		1890	172·6	
1891	2·10	2·69	1891	174·9	171·7
1892	2·50		1892	146·1	
1893	3·40		1893	177·6	
1894	3·30		1894	177·0	
1895	2·27		1895	183·0	
1896	3·72	2·91	1896	182·0	179·0
1897	2·17		1897	147·5	
1898	3·41		1898	198·8	
1899	2·93		1899	169·0	
1900	2·44		1900	197·7	
1901	3·41	2·74	1901	177·3	172·1
1902	1·89		1902	137·5	
1903	2·34		1903	174·6	
1904	3·07		1904	191·6	
1905	3·01		1905	179·4	
1906	2·42	2·21	1906	163·0	154·6
1907	1·56		1907	148·3	
1908	3·53		1908	176·5	
1909	1·78		1909	140·6	
1910	1·78		1910	144·8	
1911	3·50	2·63	1911	188·6	144·7
1912	1·41		1912	120·6	
1913	2·07		1913	136·4	
1914	2·84		1914	141·2	
1915	3·33		1915	137·0	
1916	1·49	1·59	1916	125·4	116·2
1917	1·75		1917	105·3	
1918	2·14		1918	125·8	
1919	1·41		1919	110·0	
1920	1·18		1920	114·8	

PHTHISIS PULMONALIS AND OTHER TUBERCULAR DISEASES.

The number of cases notified as Pulmonary Tuberculosis for the year has been 70 as compared with 45 last year and with 62 during the previous year.

Of other Tubercular Disease there were 65 notified as compared with 46 last year and with 39 during the previous year.

This year the total notifications from all forms of Tubercular Disease has been 135 as compared with 91 last year.

However, it does not by any means follow that the number of cases notified is a true index of the amount of Tubercular Disease flourishing within your district because it is notorious that many cases of Tubercular Disease are never notified at all.

During the year, of the deaths registered as caused by tubercule, 29 were of persons never notified to me as suffering from Tuberculosis, and 14 deaths were registered of persons who had been notified within three months of death.

If curative means were to be of any avail, these 14 persons had little chance of being benefited by the present recognised best means of treatment.

In the Ministry of Health Memo 40/Int., the Ministry say:— "*The Ministry would also be glad to have information as to the extent to which the requirements as to notification of Tuberculosis are observed by Medical Practitioners, and of any action taken to enforce the regulations and secure prompt notification.*"

From the statement above it appears that several Medical Practitioners do not notify their cases of Tuberculosis and that others notify at a period so late in the disease as prevents all attempts at treatment.

I have referred to this subject oftener than once, and in my last Annual Report I specifically draw your Council's attention to the subject in the following words:—

> " Apparently Medical Practitioners fail to realise that in
> " failing to carry out an Order of the Ministry of Health they
> " are liable to a penalty of £50 for each offence, and I consider
> " the time has arrived when your Council should warn seriously
> " medical men of the consequences of the failure to rigidly carry
> " out the Order of the Ministry."

but the subject has been entirely ignored by your Council. You have not in any way warned Medical Practitioners and the failure to notify a considerable number of cases of Tuberculosis continues, and so many cases not being brought to the notice of the Authority charged with the treatment of Tuberculosis do not have the chance they might have of treatment and of probable arrest of the disease to such an extent as would allow some of them to resume such work as they may be capable of doing.

I strongly request your Council to consider this matter of the non-notfication and of the early notification of Tuberculosis, to warn Medical Practitioners of the result of their failure to notify, of the penalty they incur, and above all to adopt such measures as will have the effect of at least the notification of all cases of Tuberculosis.

PREVENTION AND TREATMENT OF TUBERCULOSIS.

Improved sanitary surroundings and improved labour conditions and of places where labour is carried on, are the main factors in the lessening of Tuberculosis.

Whilst the organic cause of Tuberculosis is quite well known it may be that there are many subsidiary causes not yet recognised or quite rightly understood.

There is the question of a fouled water supply to be considered. A water supply not fouled enough to cause any acute pathological condition but yet in a state to cause a greater susceptability in a person to develope Tuberculosis, who, were he not provided with this fouled water would be able to resist the attack of the Bacillus Tuberculosis.

That is a question requiring much study and experimentation before it can be decided whether such a water injuriously or not effects the resisting power of the individual.

The lessening of house overcrowding and of area overcrowding does a lot to reduce the incidence of Tuberculosis. The improvement of factories, the shortening of working hours, and above all, the improvement of feeding are the chief factors of lessening the attacks of Tuberculosis.

The clearing out of slum areas and the abolition of slum houses reduced the death-rate from Tubercule in one of our largest provincial towns from just over 4·0 per 1,000 to 1·9 per 1,000, and in this case it was the same population to which both figures refer.

The treatment of Tuberculosis is within the jurisdiction of the County Council.

During the past five years 343 cases of Pulmonary Tuberculosis have been notified, and of these during the same period 88 or 25·6 per cent have been registered as dying within the district. Others may have died elsewhere, but 25·6 per cent of deaths of those attacked by a preventable disease is a fact worthy of the most careful study and consideration.

Up to the present time it must be admitted that medical science has not discovered any real and unfailing cure for Tuberculosis, medical science has not yet discovered any remedy which has any decided effect on the majority of cases.

This state of affairs was clearly demonstrated at the Annual Conference of the Society for the Prevention and Cure of Tuberculosis, held at Liverpool last October, at which I represented your Council.

There it was clearly demonstrated that no real advance in the treatment Medicinally of Tuberculosis had been made.

An epitome of the proceedings of this Conference, a Conference quite up to the high-water mark of all this Association's Conferences, I presented for your consideration in November last year.

The much vaunted Serum treatment of Spahlinger now attracting much wide world attention, has yet to be proved to be of any real value. Its use has been restricted up to the present, and sufficient time has not elapsed to prove or disprove its efficacy, but learned observers are not pinning much faith in the powers claimed for it by its maker.

The death-rate from Pulmonary Tuberculosis for the year has been 0·871 per 1000 and for other Tubercular Diseases the rate has been 0·357 per 1000, or a death-rate of 1·228 per 1000 for all diseases due to the Bacillus Tuberculosis.

DEATHS FROM RESPIRATORY DISEASES OTHER THAN PHTHISIS.

The number of deaths from these diseases, e.g.: Pneumonia (86), Bronchitis (74), and other Respiratory Diseases (8) is 168 as compared with 199 last year and with 113 during the previous year.

This gives a death-rate of 2·40 per 1000 as compared with a death-rate of 2·92 per 1000 last year, and with a rate of 2·72 for 1918.

INFLUENZA.

The present year has been free from any recrudescence of Influenza in a severe form, though during the last month of the year there was a fairly large outbreak of this disease. The type was however mild and deaths were few.

The number of deaths from Influenza for the year was 25 as compared with 38 during 1919.

UNCERTIFIED DEATHS.

The number of these deaths during the year has been 23 as compared with 14 last year and with 19 during the previous year.

This equals a percentage of all deaths of 2·3 as compared with 1·5 last year and with 1·6 during 1918.

INFECTIOUS DISEASES NOTIFIED.

The number of cases notified this year has been 632 exclusive of Tuberculosis, as compared with 1051 exclusive of Measles and Tuberculosis last year.

Of the cases notified 368 or 58·2 per cent are Scarlet Fever as compared with 572 cases last year; 5 or 0·79 per cent are Enteric Fever as compared with 3 cases last year; 139 or 22·0 per cent are Diphtheria as compared with 137 cases last year; 44 or 6·9 per cent are Erysipelas as compared with 39 cases last year; 22 or 3·4 per cent are Ophthalmia Neonatorum as compared with 16 cases last year; 5 or ·79 per cent are Puerperal Fever as compared with 3 cases last year; 49 or 7·7 per cent are case of Pneumonia (43) Influenzal Pneumonia (5) Encephalitis Lethargica (1), Malaria (0), and Dysentry (0), as compared with 81 cases of the same diseases last year.

The compulsory notification of Measles has now been repealed.

The cyclical increase and decrease of Scarlet Fever are shown by the fall of these cases during the year and such a fall I predicted in my last Annual Report. It is quite likely that the number of cases during 1921 may show a further slight fall and by the end of that year, the lowest point of the cyle may have been reached.

The attack rate this year of the diseases enumerated has been 9·0 per 1000 as compared with 13·8 per 1000 last year, and with 7·1 per 1000 during the previous year.

The following table gives the number of notifications of infectious diseases (Measles and Tubercule excluded) and the attack rate per 1000 since the adoption of the Infectious Diseases Notification Act in 1890:—

Year	No. of Notifications	Attack Rate per 1000
1890	403	9·61
1891	412	8·15
1892	574	11·14
1893	842	16·15
1894	538	10·14
1895	711	12·75
1896	819	14·26
1897	378	6·63
1898	403	6·87
1899	485	8·13
1900	683	11·27
1901	822	13·51
1902	818	12·95
1903	1211	18·78
1904	789	11·85
1905	655	9·49
1906	484	6·82

Year		No. of Notifications		Attack Rate per 1,000
1907	...	498	...	6·82
1908	...	685	...	9·14
1909	...	574	...	9·14
1910	...	353	...	5·52
1911	...	377	...	5·90
1912	...	349	...	5·29
1913	...	464	...	6·96
1914	...	943	...	14·03
1915	...	669	...	9·95
1916	...	851	...	12·44
1917	...	322	...	4·90
1918	...	479	...	7·12
1919	...	851	...	13·97
1920	...	632	...	9·03

SMALLPOX.

The district has been free from Smallpox during the year.

Exemptions from Vaccination continue to be numerous.

The following table shows the Vaccinated State of the Chester-le-Street Poor Law Union since 1905. There does not appear to be any increase of protected persons within the Union.

Year	Births.	Vaccinated	Exempted	Percentage of Unvaccinated Children
1905	2612	1966	47	2·33
1906	2588	1964	59	2·91
1907	2534	1792	124	6·47
1908	2810	1682	523	23·71
1909	2876	1525	690	31·15
1910	2829	1525	853	35·87
1911	2685	1492	853	36·37
1912	2696	1329	970	42·19
1913	2696	1320	977	42·57
1914	2719	1195	1095	47·81
1915	2436	984	986	50·05
1916	2187	982	907	41·47
1917	2087	899	871	41·73
1918	2275	766	941	41·36
1919	2126	815	992	46·66
1920	2685	960	1362	50·70

SCARLET FEVER.

The number of cases of Scarlet Fever notified during the year has been 368 as compared with 572 cases last year and with 365 cases the previous year.

The attack rate per 1000 is 5·25 as compared with a rate of 8·40 per 1,000 last year, and with an attack rate of 5·72 per 1,000 during 1918.

The type has again been mild, the number of deaths being 9, and the mortality rate 2·4 per cent as compared with a mortality rate of 1·04 per cent last year, and with a rate of 3·56 per cent the previous year.

Whilst Scarlet Fever is always endemic in your district the mortality is now particularly low.

The spread of Scarlet Fever is caused chiefly by the carelessness of parents who nowadays do not dread Scarlet Fever, the true diognosis of mild cases, and the exegencies of school life.

The striking distance of Scarlet Fever is not great nor is the infectious period so long as has been considered in the past.

The following table gives the number of cases and the attack rate for the district since 1890 :—

Year.	Number of Cases Notified.	Attack Rate. per 1,000.
1890	284	5·73
1891	267	5·28
1892	404	7·81
1893	331	6·31
1894	304	5·72
1895	495	8·90
1896	553	9·75
1897	217	3·80
1898	273	4·65
1899	333	5·40
1900	527	8·69
1901	631	10·37
1902	554	8·87

Year	Number of Notifications.	Attack Rate per 1,000.
1903	872	13·52
1904	458	6·88
1905	383	5·55
1906	223	3·14
1907	264	3·61
1908	390	5·20
1909	379	6·20
1910	199	3·11
1911	148	2·31
1912	234	3·55
1913	300	4·50
1914	726	10·80
1915	450	6·69
1916	484	7·05
1917	181	2·69
1918	365	5·71
1919	572	8·40
1920	368	5·25

MEASLES.

This disease is not now compulsorily notifiable, the number of deaths this year has been 5 as compared with 24 last year.

The death-rate from Measles is thus 0·07 per 1000 as compared with 0·35 per 1000 last year.

ENTERIC FEVER.

The number of cases of Enteric Fever notified this year has been 5 as compared with 3 cases last year.

The incidence of Enteric Fever, so marked in your district up to 1914 has become almost negligible, the cause of which is rather difficult to explain.

It may be climatic, and as your district from a sanitary point of view has not materially changed during the past ten years it can hardly be attributable to sanitary reasons.

It is to be hoped that Enteric Fever will remain absent, for its long acute stage and longer period of convalescence rob the worker of many weeks of labour and bring poverty to an otherwise thriving family.

The following table gives the number of cases and the attack rate per 1,000 since 1890.

Year	Number of Notifications	Attack Rate per 1,000
1890	53	1·26
1891	71	1·40
1892	69	1·34
1893	353	6·77
1894	111	2·09
1895	72	1·30
1896	108	1·88
1897	33	0·57
1898	39	0·66
1899	57	0·95
1900	57	0·94
1901	71	1·16
1902	67	1·07
1903	32	0·49
1904	48	0·71
1905	78	1·13
1906	65	0·91
1907	23	0·31
1908	112	1·49
1909	51	0·81
1910	28	0·44
1911	57	0·89
1912	12	0·18
1913	29	0·43
1914	33	0·49
1915	8	0·11
1916	23	0·34
1917	16	0·23
1918	8	0·11
1919	3	0·04
1920	5	0·07

DIPHTHERIA.

The number of cases notified during the year has been 139 as compared with 137 last year, and with 56 during the previous year.

This gives an attack rate of practically 2·0 per 1000 as compared with a similar rate last year, and with an attack rate of 1·13 per 1000 for the year 1918.

The Ministry of Health asks for information as to the utilization of Bacteriological aids to the diagnosis of this and other diseases.

A table of such will be appended further on in this report, but so far as Diphtheria is concerned the use of Bacteriological aid in determining the nature of the sore throat under consideration is remarkably little.

Of the 139 notifications which I received, there were only 3 cases subjected to Bacteriological examination, and of these 3 cases 2 were positive and 1 negative. It will be seen that only in 2·1 per cent. of all the cases was any swab taken, and so the Medical Practitioner failed to have this important assistance to help him in arriving at a true diagnosis of an inflamed state of the pharynx.

There were no more than 16 swabs from throats for the whole year, submitted to the Bacteriologist, and of these 13 or 81·25 per cent. were negative and 18·75 per cent. positive.

Of those submitted, in cases diagnosed as Diphtheria 33·3 per cent were negative.

One wonders what per cent. of negative results would have been had the whole 139 cases been swabbed, but if their negatives equalled the negative in the diognised cases of Diphtheria the incidence of Diphtheria would have been considerably reduced, and your district saved much expense.

Diphtheria is not always easily nor surely diognosed and bacteriology assists the doctor very greatly in arriving at a true estimation of the nature of the disease he is dealing with.

To take a swab is easy, it costs the doctor nothing and one is astonished at the gross apathy shown in refraining from swabbing a suspected throat. I have endeavoured over and over again to get medical men to swab throats. In some cases I have had promises to do so, but am afraid many of such promises have been forgoten.

Even if the taking of swabs becomes general there is no need for the doctor to wait the result of its examination before he applies the remedy necessary to cases of suspected Diphtheria. If he proposes to use a serum there is no need to delay a minute. In the days of the doctor's universal motor car, the doctor no doubt carries serum with him.

The dread of anaphylaxis in the future should not worry him much for he knows that if an extraneous serum has been probably used in the past he can ascertain if there is any danger from anaphylaxis by the inhibition of two or three minute doses of the serum he proposes to use.

The Ministry asks information as to the supply and prompt use of Diphtheria antitoxin.

This serum is provided to all medical men free of charge.

From what information I have it does not appear to be generally used.

During the year I had notifications of Diphtheria from 30 doctors and the quantity of antitoxin I distributed was 200,000 units.

Of the 30 gentlemen I have mentioned 13 doctors notifying 79 cases applied for antitoxin, and 17 doctors notifying 60 cases did not apply. Of course it is quite possible that all the 17 men used serum, and it is very likely they did so knowing so well that antitoxin is the only real sheet anchor to depend on.

Medical men should always have antitoxin by them, its potency lasts for a considerable time, the date when full potency comes to an end is prominently marked on each dose, and after that date the potency does not deteriorate more than ten per cent. per annum.

The efficacy of the curative effects of antitoxin depends entirely on the date given, that is to say the sooner after the disease appearing the better, and its curative power is in direct inverse ratio to the length of the interval between the commencement of the illness and the time of injection.

I would go so far as to say that if antitoxin could always be applied on the first day of the disease a fatal result would always be avoided.

The Doctor must not be blamed always for delay, more frequently the parents are at fault. The serious nature of the child's illness may not be recognised until more than one day has passed and the serum has less chance of doing good for every hour that is lost in its exhibition.

The number of deaths from Diphtheria during the year has been 21, or a case mortality of 15·1 per cent. as compared with 26 deaths last year and a case mortality of 18·97 per cent.

Year	Number of Notifications	Attack Rate per 1,000
1890	6	0·11
1891	15	0·30
1892	27	0·52
1893	29	0·55
1894	15	0·28
1895	16	...
1896	57	1·00
1897	21	0·36
1898	16	0·27
1899	10	0·16
1900	17	0·28
1901	33	0·54
1902	64	1·02
1903	128	1·98
1904	130	1·95
1905	80	1·15
1906	112	1·58

Year	Number of Notifications	Attack Rate per 1,000
1907	128	1·75
1908	104	1·38
1909	76	1·21
1910	53	0·83
1911	92	1·44
1912	39	0·59
1913	61	0·93
1914	89	1·32
1915	151	2·11
1916	169	2·51
1917	90	1·32
1918	76	1·13
1919	137	2·25
1920	139	2·00

WHOOPING COUGH.

The number of deaths from Whooping Cough has been 4 as compared with 2 last year, and the death-rate has been 0·05 per 1000 as compared with a death-rate of 0·02 per 1000.

DIARRHŒA.

The number of deaths during the year has been 41 as compared with 38 last year, and with 63 the previous year.

This gives a death-rate of 0·58 per 1000 as compared with a rate of 0·55 per 1000 last year, and with a rate of 0·93 per 1000 the previous year.

ERYSIPELAS.

The number of cases notified this year has been 44 as compared with 39 last year, and with 24 during the previous year.

OPHTHALMIA NEONATORUM.

The number of cases notified has been 22 as compared with 16 cases last year, and with 6 cases during 1918.

ENCEPHALITIS LETHARGICA.

One case has been notified during the year. The patient died and this was an undoubted case of this disease.

MALARIA, DYSENTERY, CEREBRO SPINAL MENINGITIS AND POLIO MYELITIS.

No case of these diseases was notified.

PNEUMONIA AND INFLUENZAL PNEUMONIA.

Of these diseases 48 cases were notified but 86 deaths from Pneumonia of all forms were registered.

BACTERIOLOGICAL EXAMINATIONS.

Disease.	Positive.	Negative.	Inconclusive.	TOTAL.
Enteric Fever ...		3		3
Diphtheria ...	3	12	1	16
Phthisis ...	24	90		114
	27	105	1	133

NUMBER OF CASES REMOVED TO HOSPITAL.

Scarlet Fever	...	161 cases
Enteric Fever	...	1 „
Diphtheria	...	81 „
Total	...	243 cases

REMOVAL OF HOUSE REFUSE.

Birtley, Lamesley, Ouston, and Urpeth Parishes Mr. Brown reports as follows:—

" In the parish of Birtley where the Council's workmen do the scavenging the work was well done. The only complaint one could reasonably make is, that uncovered carts were used at times."

" With regard to the remainder of the division which is done by contractors under my supervision the work was carried out satisfactorily in the middle division of Lamesley and in Ouston parish and the south eastern division of Urpeth."

" It was also fairly well done in Lamesley eastern division and Urpeth western division."

" There was neglect more or less serious at times in Lamesley western and Urpeth eastern."

Townships of Cocken, Edmondsley, Lumley Great, Pelton, Plawsworth, Waldridge, and Witton Gilbert, Mr. Swaddle reports:—

"At the end of the year the whole of Pelton and Plawsworth parishes, one section of Witton Gilbert parish, and about one third of Great Lumley parish were done by the Council's own Employees (direct labour)."

"The whole of Edmondsley, Cocken, two-thirds of Great Lumley parishes and the remaining three sections of Witton Gilbert parish were Scavenged by Contractors. The parish of Waldridge (except 20 houses done by the occupiers) by the owners of the Colliery."

"In the parts done by the Council's Employees there has been a decided improvement in the scavenging, though with better organisation, more frequent and regular removal of refuse, and therefore an improvement could be made in Pelton parish."

"On the whole there has been an improvement in results under the "Contract" system."

"In Waldridge parish 90 per cent. of the houses belong to the Colliery Co. and little trouble has been found in the removal of the refuse from the houses."

Parishes of Barmston, Biddick South, Burnmoor, Lambton, Lumley Little, Harraton, Usworth and Washington, Mr. Wadge reports :—

"The Parishes now scavenged by the employees of the Council are Lambton, Burnmoor, Lumley Little, Washington, Usworth except 203 houses, and 108 houses in Harraton Parish."

"Biddick South and Barmston are contracted for, as are also 203 in Usworth and 557 houses in Harraton parishes."

"There has been a decided improvement in the state of the Scavenging to that which existed in 1918 and 1919."

The problem of finding suitable places for the "tipping" of ash-pit contents is as acute as ever and any real and permanent solution is only to be found in getting rid of the nocuous ingredients of the ash-pits by the universal induction of the water carriage system.

The introduction of such a system is not without its difficulties. Firstly there is the cost, great in the meantime but not insuperable. There is secondly the question of a water supply sufficient for ordinary domestic purposes and sanitary purposes.

Most if not all the companies supplying water to the district find it difficult to do so, probably not so much from the real want of water but from a too small pipe area.

Most of the main pipes now in use were originally laid when the district contained a much smaller population and apparently not sufficient thought had been given to future possibilities and the district is now suffering from that conservative policy followed in the past.

I have no doubt whatever but that this difficulty will be overcome in the near future but the very greatly inflated costs now prevailing and the dearth of surplus capital are conspiring to retard any betterment of this condition.

Herewith I give a table of the different types of closet accommodation now existing.

During the year a fairly large addition has been made to the water-closet type with some diminution of the conservative system of hoarding dangerous material in the vicinity of the houses.

Township.	Number of Dwelling Houses and other occupied buildings.	Closet Accomodation.				Refuse.	
		W.C.	E.C.	A.C.	Privies.	Ash-pits.	Ash-bins.
Barmston	109	16	...	98	10	...	...
Biddick, South	28	13	...	17	2	...	...
Birtley	2470	1406	...	1170	271	...	...
Burnmoor	279	54	...	96	145	...	...
Cocken	32	2	...	25	6	...	...
Edmondsley	467	32	...	307	133	...	...
Harraton	690	130	...	535	89	...	...
Lambton	30	4	...	16	11	...	...
Lamesly	1449	307	...	855	357	...	...
Lumley, Great	434	46	5	295	82	...	...
Lumley, Little	394	52	...	341	37	...	...
Ouston	206	23	...	178	23	...	...
Pelton	1828	431	...	1190	189	...	...
Plawsworth	292	34	...	134	118	...	...
Urpeth	813	97	...	466	273	...	...
Usworth	1557	316	...	1178	108	...	...
Waldridge	296	...	...	275	19	...	...
Washington	1590	472	...	1096	137	...	...
Witton Gilbert	1647	234	27	1035	420	...	...
Totals	14681	3669	32	9307	2430	...	...

SANITARY IMPROVEMENTS ACCOMPLISHED DURING THE YEAR AND REQUIRED IN THE FUTURE.

Speaking generally there is much to be done in your district to render all the houses fit for human habitation.

There continues a marked dearth of houses, and many schemes for increasing the number of houses have been considered and adopted by your Council, and at present at least 3 of these schemes are in operation, viz: in Washington, Birtley and Pelton areas.

Many old houses remain to be closed and demolished as soon as there are any houses to shelter those displaced, and provide for those persons who perforce are overcrowding good houses.

An addition to the housing accommodation of your district has been obtained by inhabiting 670 of the Wood Hutments at Elisabethville, which were erected during the war for Belgians.

Although these huts are meagre in accommodation they are certainly better than none, and as a temporary arrangement have improved the housing conditions of those who occupy them.

BARMSTON.

The houses in this township (106) are generally in good condition, and the streets in Pattinson Town are well made. Much money was spent by the owners several years ago in improving the houses of this village.

BIRTLEY.

The condition of the houses here is practically the same as before. Eight tenements have been closed.

Two houses at Brown's Buildings were reconstructed, being practically rebuilt, save some portions of the inner walls, (the owners of which are the Lambton and Hetton Collieries, Co.) and provided with W.C's. These are 4 roomed houses.

Improvements in the shape of back yards and water-closets are about to be provided at Peareth Terrace, Birtley.

At New Street and Hill Street (W), Birtley, the old pantries were pulled down and large sculleries provided, and at Hill Street to each house an additional bedroom (8 feet high) is being provided. These houses are owned by the Pelaw Main Collieries Co.

BURNMOOR.

Numbers 1 to 9, North Terrace, New Lambton, have been substantially repaired in respect to paved back yards, new sculleries, and water-closets replacing ash-closets.

Two houses have been built and five are now under construction.

There is still a large quantity of old and done houses in this township which should be closed being beyond proper repair, so as to be fit for human habitation.

EDMONDSLEY.

In the village of Edmondsley the houses generally are old and in poor repair, the ash-pits are bad and in some places, such as Coxon's Row, delapidated.

Generally speaking the houses in Coxon's Row are quite unfit for human habitation and should be closed. The roofs in some of the streets such as part of the Stone Row are leaky and generally the spouting is very defective, altogether the village is getting into a delapidated and neglected condition and it is only scarcity of houses which should prevent your Council from taking drastic measures to remedy the growing degree of delapidation which is taking place here.

Nineteen notices have been served with respect to nineteen houses which are absolutely unfit for human habitation.

HARRATON.

This parish can still show its large proportion of old houses, but during the year some improvements have been carried out. Eight floors have been cemented, and 31 houses have been generally repaired.

There is however ample room for many more improvements and closure of houses, but here again the marked dearth of houses hinders much being done in the case of house closure, until such time as new houses can be built.

LAMESLEY.

A really large amount of new work has been done in this parish during the year, consisting of 27 pantries rebuilt, 97 new drains laid, 64 drains re-constructed, 50 back yards enclosed, 42 back yards concreted, 58 water closets provided, 34 privy ash-pits abolished and over 60 houses roofs repaired. Besides these there are many minor improvements in lighting, ventilation, rooms, walls and ceilings plastered, and improved streets.

No houses have been closed in the township, but 5 houses have been erected during the year.

There remains a goodly number of old houses in this township whose days are past and which should be closed.

LUMLEY, GREAT.

This township has been improved during the past few years, but there still remains much to be done in the matter of closing the old houses. Such places in Lumley Village as Paradise, New Chester, Woodman's Place, Goosey Pig Row and others would shine better if closed and daylight let into the places they now occupy.

There have been 5 ash-pit privies made into water-closets. No houses have been built or closed in the parish and very much remains to be done in the closing of defective houses.

LUMLEY, LITTLE.

The greater number of the houses in this township are comparatively new houses and consequently are in good condition but at Brecon Hill there are houses of a doubtful character, where little if any improvement has been effected.

At New Lumley nine houses have been built and occupied during the year and two houses have been closed. One water-closet has been provided and one back yard has been cemented.

OUSTON.

Two houses were closed, viz.: one at Ewehill and one at Ouston Bank Farm. None were built.

PELTON.

In this parish 102 houses were found unfit for human habitation but the absolute scarcity of houses compelled them to be left occupied.

A scheme for building houses in this township is about to be commenced.

PLAWSWORTH.

This township remains much in the same state as it was in last year.

URPETH.

Conditions in Urpeth township so far as housing is concerned except that two cottages at Urpeth North Farm have been converted into one house. There has however been activity in repairs, viz.: 43 houses have had their roofs repaired, 68 spouted and 14 generally repaired, 31 new drains have been laid, 18 privy ash-pits have been abolished and 15 water-closets provided.

USWORTH.

In this township the following is the chief work done, 9 floors have been cemented, 20 back yards cemented, 4 water-closets built, no new houses have been built and none closed, 3 pantries built, 7 houses substantially repaired and reconstructed.

The houses in this parish, especially at Usworth Colliery and Waterloo, provide a fair and generous field for house improvement by raising the upper rooms to a height of 8 ft., and until this is done the houses provided there and similar ones elsewhere in this township will remain as they are in a condition much under what is nowadays considered a good average house.

WALDRIDGE.

Nothing can be said respecting any improvement of the houses in this parish, but there remains room here for improvements.

WASHINGTON.

There is a fair record of work in this parish to chronicle. 15 floors have been laid in cement, 12 back yards have been cemented, 10 water closets built, 4 pantries provided, 42 houses generally repaired, 17 houses re-constructed and substantially repaired, 3 houses after being legally closed have been re-occupied. No new houses have been occupied, but there were at the end of the year 47 houses building and one house had been closed.

There is plenty of room in this township for much reconstructive work and closing of houses, which at present do not come up to the present standard of living houses which should be aimed at. As new houses are built one hopes that your Council will insist on the betterment of such houses as can be bettered, and the closing of the ancients which have served their time to the satisfaction of past generations, but which are now obsolete.

WITTON GILBERT.

This township shows the large number of 62 houses unfit for human habitation, and 31 houses whilst not absolutely unfit, are yet in such a state of disrepair as renders them all but unfit for human habitation. There have been 89 closing orders made on unfit houses in this parish during the year, and here again as throughout the district the impossibility of housing those whom an effective closing order would render houseless, renders action under a closing order impossible until such time as houses are provided to absorb the homeless.

The improvements made in the several townships have been stated generally, but I hope by another year to get back to more definite statements, especially as to the exact locality wherein the township improvements have been made, and to such details as were given in pre-war days.

Many houses schemes have been projected, and some have been commenced after the end of the year under review, such as those in the parishes of Washington, Birtley and Pelton.

A few houses have been built by private enterprise, but they are so few as to be regarded as negligible.

FACTORIES AND WORKSHOPS.

These places have been regularly inspected, the results of which are set out in table attached.

Annual Report of the Medical Officer of Health for the year 1920, for the Rural District of Chester-le-Street on the administration of the Factory and Workshop Act, 1901, in connection with

FACTORIES, WORKSHOPS, WORKPLACES & HOMEWORK.

1.—INSPECTION OF FACTORIES, WORKSHOPS & WORKPLACES.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises. (1)	Number of Inspections. (2)	Number of Written Notices. (3)	Number of Prosecutions. (4)
Factories ... ... (Including Factory Laundries)	30	21	......
Workshops ... ... (Including Workshop Laundries)	122	14	......
Workplaces ... ... (Other than Outworkers' premises included in Part 3 of this Report)	......	......	......
Total	152	35	......

2.– DEFECTS FOUND IN FACTORIES, WORKSHOPS & WORKPLACES

Particulars. (1)	Number of Defects. Found. (2)	Number of Defects. Remedied. (3)	Number of Defects. Referred to H.M. Inspector. (4)	Number of Prosecutions. (5)
*Nuisances under the Public Health Acts:**				
Want of cleanliness	12	11	......	......
Want of ventilation	......	......	......	......
Overcrowding	......	......	......	......
Want of drainage of floors	1	1	......	......
Other nuisances	20	23	......	......
Sanitary accommodation – insufficient	......	......	......	......
Sanitary accommodation – unsuitable or defective ...	2	2	......	......
Sanitary accommodation – not separate for sexes ...	......	......	......	......
Offences under the Factory and Workshop Acts:				
Illegal occupation of underground bakehouse (s. 101)	......	......	......	... ..
Breach of special sanitary requirments for bakehouses (ss. 97 to 100)	......	......	......	......
Other offences ... ... (Excluding offences relating to outwork which are included in Part 3 of this Report)	......	......	......	......
TOTAL	35	37		

* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

[P.T.O.

4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year. (1)		Number. (2)
Important classes of workshops, such as workshop bakehouses may be enumerated here.	Bakehouses	15
	Other Workshops	106
	Total number of Workshops on Register ...	121

5.—OTHER MATTERS.

Class. (1)		Number. (2)
Matters Notified to H.M. Inspector of Factories :—		
Failure to affix Abstract of the Factory and Workshop Acts (s. 133 1901)		
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Acts (s. 5, 1901.	Notified by H.M. Inspector ...	
	Reports (of action taken) sent to H.M. Inspector	
Other		
Underground Bakehouses (s. 101) in use at the end of the year ...		

JOHN TAYLOR, Medical Officer of Health,

30th April 1921.

TABLE I.

CHESTER-LE-STREET RURAL DISTRICT.

Vital Statistics of Whole District during 1920 and previous Years.

YEAR.	Population estimated to middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected Number.	Nett.				of Non-residents registered in the District.	of Residents not registered in the District.	Under 1 year of ago.		At all Ages.	
			Number.	Rate.	Number.	Rate.			Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1915 ……	67,194	2,043	2,047	30·46	1,005	14·94	29	98	280	137·0	1,074	15·98
1916 ……	67,194	1,834	1,834	27·29	813	12·09	19	114	230	125·4	927	14·45
1917 ……	67,194	1,757	1,757	26·14	755	11·25	30	107	185	105·3	832	12·38
1918 ……	67,194	1,891	1,891	28·14	1,089	16·20	21	111	238	125·8	1,200	17·82
1919 ……	68,020	1,845	1,845	27·12	824	12·11	14	98	203	110·0	908	13·35
1920 ……	70,000	2,378	2,378	33·97	849	12·13	25	126	273	114·8	950	13·57

Area of District in acres (exclusive of area covered by water). 32,429.

Total population at all ages, 63,882
Number of inhabited houses, 12,798
Average number of persons per house, 4·99
At Census of 1911.

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TABLE II.

CHESTER-LE-STREET RURAL DISTRICT.

Cases of Infectious Diseases notified during the Year 1920.

Notifiable Diseases.	Cases Notified in Whole District.								Total Cases notified in each Locality.																			Public Institutions.		
		At Ages—Years.																												
	At all ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 & upwards.	Barmston.	Biddick, South.	Birtley.	Burnmoor.	Cocken.	Edmondsley.	Harraton.	Lambton.	Lamesley.	Lumley, Great	Lumley, Little	Ouston.	Pelton.	Plawsworth	Urpeth.	Usworth.	Waldridge.	Washington.	Witton Gilbert.	Dame Margaret's Home.	Earl's House Industrial School.	Sanatorium.
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smallpox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Encephalitis Lethargica	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Cholera	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diphtheria (Including Membranous Croup)	139	.....	26	95	11	6	1	.....	3	.....	22	2	.....	4	16	.....	4	12	3	4	21	.....	12	6	.....	22	8	.....	.....	.....
Erysipelas	44	.....	1	4	2	13	18	6	.....	.....	10	.....	.....	2	.....	.....	5	2	3	1	6	3	1	3	1	6	1	.....	.....	.....
Scarlet Fever	368	3	73	260	24	6	2	.....	8	.....	47	12	.....	20	17	.....	32	4	7	5	65	6	59	14	1	27	44	.....	.....	.....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dysentery	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Enteric Fever	5	.....	.....	1	1	2	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	1	.....	.....	.....
Malaria	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Relapsing Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Continued Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Puerperal Fever	5	.....	.....	.....	2	3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	1	.....	.....	.....	.....
Cerebro-spinal Meningitis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pneumonia	43	3	11	10	8	9	2	.....	.....	1	2	2	2	.....	.....	.....	.....	3	10	.....	10	8	.....	3	.....	.....	2	.....	.....	.....
Poliomyelitis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pulmonary Tuberculosis	70	.....	.....	31	10	22	7	.....	.....	.....	11	5	.....	3	4	.....	5	1	5	2	12	2	4	4	2	2	8	.....	.....	.....
Other forms of Tuberculosis	65	8	9	37	9	1	1	.....	.....	.....	13	2	1	2	.....	.....	3	3	3	3	16	1	9	3	3	1	2	.....	.....	.....
Glanders in man	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Influenzal Pneumonia	5	.....	2	.....	1	1	1	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Anthrax in man	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ophthalmia Neonatorum	22	22	.....	.....	.....	.....	.....	.....	.....	1	5	1	.....	1	4	.....	2	2	1	.....	.....	.....	1	1	.....	2	1	.....	.....	.....
Totals	767	36	122	438	69	63	33	6	11	2	115	24	3	33	41	.....	51	27	33	15	132	20	86	37	7	63	67	.....	.....	.....

Notifiable Diseases.	Number of Cases Removed to Hospital from each Locality.																			Public Institutions.		
	Barmston.	Biddick, South	Birtley.	Burnmoor.	Cocken.	Edmondsley.	Harraton.	Lambton.	Lamesley.	Lumley, Great	Lumley, Little	Ouston.	Pelton.	Plawsworth.	Urpeth.	Usworth.	Waldridge.	Washington.	Witton Gilbert.	Dame Margaret's Home.	Earl's House Industrial School.	Sanatorium.
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smallpox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Encephalitis Lethargica	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cholera	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diphtheria (Including Membranous Croup)	3	.....	7	1	.....	1	13	.....	3	6	2	2	13	.....	7	3	.....	19	1	.....	.....	.....
Erysipelas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet Fever	1	.....	18	5	.....	9	9	.....	15	1	2	.....	22	1	28	14	1	15	20	.....	.....	.....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dysentery	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Enteric Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Malaria	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Relapsing Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Continued Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Puerperal Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cerebro-spinal Meningitis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pneumonia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Poliomyelitis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pulmonary Tuberculosis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other forms of Tuberculosis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Glanders in man	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Influenzal Pneumonia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Anthrax in man	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ophthalmia Neonatorum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals	4	.....	25	6	.....	10	22	.....	18	7	4	2	35	1	35	18	1	34	21	.....	.....	.....

TABLE III.

CHESTER-LE-STREET RURAL DISTRICT.

Causes of, and Ages at Death during the Year 1920.

CAUSES OF DEATH.	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Deaths in Localities at all Ages.—(Townships).																			Public Institutions.		
	At all ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 & upwards.	Barmston.	Biddick, South	Birtley.	Burnmoor.	Cocken.	Edmondsley.	Harraton.	Lambton.	Lamesley.	Lumley, Great	Lumley, Little	Ouston.	Pelton.	Plawsworth.	Urpeth.	Usworth.	Waldridge.	Washington.	Witton Gilbert.	Dame Margaret's Home.	Earl's House Industrial School.	Sanatorium.
All Causes Certified	952	268	43	37	64	50	127	170	93	5	3	136	20	4	36	57	1	86	37	24	24	132	26	45	91	17	122	86	...	...	...
All Causes Uncertified	23	5	...	1	2	...	2	5	8	1	...	2	...	1	3	1	...	2	...	1	1	3	...	...	3	...	4	1	...	...	...
Enteric Fever	3	...	...	...	...	1	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	5	...	2	2	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	2	1	...	1	...	...	...	...
Scarlet Fever	9	1	2	2	4	...	...	...	...	...	1	1	...	...	...	...	...	1	...	...	1	...	...	2	...	...	2	1	...	...	...
Whooping Cough	4	2	1	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	1	...	...	...	...	...	...
Diphtheria and Croup	21	...	...	6	14	1	...	...	...	...	...	3	...	...	1	5	...	...	2	1	1	1	...	1	1	...	5	...	...	...	...
Influenza	25	1	...	...	5	1	10	6	2	1	...	2	1	...	2	3	...	...	...	1	...	1	1	...	2	...	5	6	...	...	...
Erysipelas	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Phthisis (Pulmonary Tuberculosis)	61	...	...	2	4	10	34	11	...	...	...	13	3	...	2	4	1	3	...	5	1	7	...	4	6	1	7	4	...	...	2
Tuberculous Meningitis	10	2	3	1	3	1	...	...	...	...	...	3	...	...	...	...	...	1	...	1	...	1	1	...	...	...	1	2	...	...	...
Other Tuberculous Diseases	15	4	...	2	5	1	1	2	...	...	...	3	1	...	1	1	...	2	1	1	2	1	...	...	1	...	1	...	...	...	...
Cancer, malignant disease	39	...	...	...	...	...	2	23	14	...	...	4	...	...	1	3	...	5	1	...	2	4	1	4	6	1	5	2	...	...	...
Poliomyelitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis	9	2	...	2	3	1	1	...	...	...	...	5	...	...	...	1	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...
Cerebro-spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Glanders	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Anthrax	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lead Poisoning	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rheumatic Fever	3	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	1	...	...	...	...	...	...	...	...
Organic Heart Disease	89	...	...	...	3	2	17	30	37	1	...	16	...	...	3	4	...	11	8	2	2	13	1	3	5	...	10	10	...	...	...
Bronchitis	74	24	7	...	2	1	2	11	27	...	...	13	1	...	2	3	...	4	4	2	3	16	3	2	7	1	8	5	...	...	...
Pneumonia (all forms)	86	32	8	6	4	5	19	11	1	...	1	8	2	1	6	3	...	11	2	...	3	16	3	3	9	3	11	4	...	...	...
Other Diseases of Respiratory Organs	8	5	1	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	5	...	1	...	...	...	...	...	...	...
Diarrhœa and Enteritis	41	26	10	1	1	1	1	1	...	...	...	5	1	...	2	1	...	2	3	...	...	14	...	1	5	1	6	...	...	...	...
Appendicitis and Typhlitis	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Alcoholism	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver	5	...	...	...	...	...	1	3	1	...	...	1	...	...	...	...	...	...	...	...	2	1	...	...	1	...	...	...	...	...	...
Nephritis and Bright's Disease	24	...	1	...	3	1	6	10	3	...	...	3	...	...	...	2	...	1	3	...	...	2	...	2	3	2	5	1	...	...	...
Puerperal Fever	6	...	...	...	...	1	5	...	...	...	...	1	...	...	...	...	...	...	...	1	...	3	...	...	...	...	1	...	...	...	...
Other accidents and diseases of pregnancy and Parturition	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Congenital Debility and Malformation, including Premature Birth	149	145	3	1	...	...	...	...	...	1	...	16	6	2	10	9	...	12	5	6	1	17	3	7	15	4	17	18	...	...	...
Violent Deaths, excluding Suicide	40	...	2	3	4	9	8	10	4	...	...	4	3	...	1	2	...	6	1	2	...	5	3	...	4	...	5	4	...	...	...
Suicide	6	...	...	...	...	1	2	2	1	...	...	1	...	1	...	1	...	1	...	...	...	1	...	1	...	...	...	...	...	...	...
Other Defined Diseases	159	16	...	6	6	11	15	50	55	2	1	26	2	1	6	5	...	13	6	2	5	17	2	11	19	3	20	18	...	...	...
Diseases ill-defined or unknown	80	13	3	2	1	2	1	2	56	1	...	8	...	...	2	8	...	11	...	1	1	10	7	...	7	1	12	11	...	...	...
All causes	975	273	43	38	66	50	129	175	201	6	3	138	20	5	39	58	1	88	37	25	25	135	26	45	94	17	126	87	...	...	...

TABLE IV.

CHESTER-LE-STREET RURAL DISTRICT.

INFANT MORTALITY, 1920.

Nett Deaths from stated causes at various Ages under 1 Year of Age.

CAUSE OF DEATH.	Under 1 Week.	1—2 Weeks.	2—3 Weeks.	3—4 Weeks.	Total under 1 Month.	1—3 Months.	3—6 Months.	6—9 Months.	9—12 Months.	Total Deaths under One Year.
All Causes Certified	90	11	19	11	131	38	48	36	15	268
All Causes Uncertified	5				5					5
Smallpox										
Chickenpox										
Measles										
Scarlet Fever									1	1
Diphtheria and Croup										
Whooping Cough							2			2
Diarrhœa						2	8	5	4	19
Enteritis						2	2	3		7
Tuberculous Meningitis								1	1	2
Abdominal Tuberculosis									1	1
Other Tuberculous Diseases							3			3
Congenital Malformations	3	1	1		5	2	1	2	1	11
Premature Births	60	7	6	2	75	5				80
Atrophy, Debility and Marasmus	18	3	7	4	32	9	3	1		45
Atelectasis	6				6					6
Injury at Birth	1				1					1
Erysipelas										
Syphilis						1	3			4
Rickets						1		1		2
Meningitis (not Tuberculous)			1		1			1		2
Convulsions	3		1		4	1	1	3		9
Gastritis			1	1	2	1	1			4
Laryngitis				1	1	1	2		1	5
Bronchitis			1	3	4	5	10	4	1	24
Pneumonia (all forms)						5	10	12	5	32
Suffocation, overlying										
Other Causes	4		1		5	3	2	3		13
	95	11	19	11	136	38	48	36	15	273

Nett Births in the year	legitimate	2281	Nett Deaths in the year of	legitimate infants	255
	illegitimate	97		illegitimate infants	18

TABLE V.

Birth Rate, General Death Rate, Zymotic Death Rate, Diarrhœal Death Rate, and Infantile Death Rate in each Township during 1920.

Township.	Birth Rate per 1000.	General Death Rate per 1000.	Zymotic Death Rate per 1000.	Diarrhœal Death Rate per 1000.	Infantile Death Rate per 1000 born.
Barmston	18·86	11·32	....	....	100·00
Biddick, South	37·03	22·22	7·41	....	200·00
Birtley	32·58	14·26	1·03	0·51	114·28
Burnmoor	35·60	15·15	0·74	0·74	191·49
Cocken	45·71	28·57	....	....	375·00
Edmondsley	38·36	16·88	1·30	0·86	166·66
Harraton	32·78	17·22	2·38	0·29	127·27
Lambton	....	6·66	....	....	....
Lamesley	26·05	12·46	0·56	0·28	111·11
Lumley, Great	34·36	17·66	2·86	1·43	97·22
Lumley, Little	36·45	13·02	0·52	....	55·55
Ouston	34·69	25·51	2·40	....	117·64
Pelton	39·48	15·50	1·67	1·55	129·94
Plawsworth	34·96	18·18	....	....	120·00
Urpeth	28·71	11·30	1·54	0·25	....
Usworth	37·26	12·24	1·17	0·65	94·40
Waldridge	27·08	11·80	0·69	0·69	153·84
Washington	40·28	16·26	1·94	0·77	82·47
Witton Gilbert	32·88	10·75	....	0·11	97·74